



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,985	03/12/2001	Kyung-Hwan Kim	P56259	6923

7590 04/08/2004

Robert E. Bushnell
Suite 300
1522 K Street, N.W.
Washington, DC 20005

EXAMINER

TRAN, PABLO N

ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/802,985

Applicant(s)

KIM, KYUNG-HWAN

Examiner

Pablo N Tran

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-13 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Weissman* (6,449,477).

As per claims 1 and 4, *Weissman* disclosed an apparatus for transmit/receive radio signals in a pico BTS having a plurality of radio unit, a cable front-end unit for combining and distributing a operating frequency, a plurality of antennas installed in a predetermined positions, and a plurality of repeaters connected to the cable front end through a cable and a plurality of dividers and also connected to corresponding one of the antennas for controlling the transmission/reception signals to a predetermined level (fig. 1-2, col. 4/ln. 6-18).

Weissman does not specifically such coaxial cabling. However, such is notoriously well known in the art that the examiner takes Official Notice of such. In order to provide operating frequency with relatively high power transmit levels inside a building while prevent spurious interference, it would have been obvious to one of

Art Unit: 2685

ordinary skill in the art to provide coaxial cabling to the communication systems that provide radio frequency coverage within an enclosed area as taught by *Weissman*.

As per claims 2 and 5, *Weissman* does not disclosed bi-directional amplifiers. However, such is notoriously well known in the art that the examiner takes Official Notice of such. In order to prevent switch insertion loss while providing power output to a channel transition from a Tx/Rx amplifier, it would have been obvious to one of ordinary skill in the art to provide bi-direction amplifiers to the communication systems that provide radio frequency coverage within an enclosed area as taught by *Weissman*.

As per claims 3 and 6, *Weissman* does not disclosed microstrip antenna. However, such is notoriously well known in the art that the examiner takes Official Notice of such. In order to provide a compact antenna device that is small in size and lightweight, it would have been obvious to one of ordinary skill in the art to provide microstrip antenna device to the communication systems that provide radio frequency coverage within an enclosed area as taught by *Weissman*.

Allowable Subject Matter

3. Claims 713 are allowed.

Art Unit: 2685

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sabat, Jr. et al. (6,560,441), Reudink et al. (6,405,018), Jun et al. (6,374,119), Solondz (6,148,218), Kiiski (6,032,057), Cook et al. (6,032,020), Treatch (6,029,048), Bojeryd (5,946,622), Oh et al. (6,035,218), Kallander et al. (5,603,080), Tsukii et al. (5,101,166) Sohner et al. (5,018,165), and Steinberg et al. (4,566,013) disclose radiotelephone telecommunication system.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (703)308-7941. The examiner normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703)305-4385.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Application/Control Number: 09/802,985

Page 5

Art Unit: 2685

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

PABLO N. TRAN
PRIMARY EXAMINER

April 5, 2004



AVL 6/8/04